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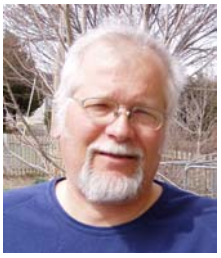

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Plant Disease in Kansas

August 14, 2006
Report 5, Volume 32

HIGHLIGHTS

Charcoal rot of soybean has been observed in north central and central Kansas. Some fields appear to have over 50 percent infection.

Pine wilt nematode has made a dramatic jump in western Kansas with the discovery of an infected pine in Colby. Infested firewood was determined to be the likely pathway of introduction.

In sunflowers, diseases such as rust, downy mildew, leaf spot, and *Rhizopus* head rot have been noted.

OUTLOOK

The hot dry summer has been ideal for many stress related diseases of row crops. Charcoal rot of soybean and some stalk rots of corn are favored by these conditions. Alfatoxin in corn is also of concern and may present problems to grain elevators and growers alike.

FORESTED AREAS and LANDSCAPES

Pine wilt disease made a big jump in geography over the past two weeks with the discovery in Thomas County (NW). The closest report to the discovery was in Ellsworth County approximately 175 miles away east of Colby. The disease was discovered after a concerned homeowner alerted county agent, Doug Musick of an Austrian pine tree which quickly died. A sample was taken and forwarded to the Great Plains Diagnostic Clinic at Kansas State University. There the sample was found to have the nematode, *Bursaphlelenchus xylophilus*. This nematode increases rapidly in numbers within the trunk and limb tissue of the tree and essentially plugs up the resin glands of the tree. The result is rapid wilting and death of the tree.

Figure 1 the male of the pine wood nematode

A follow up inspection by Kansas Department of Agriculture personnel this past week found that infected firewood from a Scot's pine tree likely moved this pest. It was learned that the previous owners who had recently moved from the house had brought in the firewood from an eastern Kansas location where the disease is widespread. It is believed that beetle adults emerged from the wood this spring and began feeding on nearby pines transmitting the nematode.

The tree was removed and will be burned in the near future. Department and Extension personnel will continue to monitor the site and nearby areas for other trees that may show symptoms of the disease. Immediate removal of infected trees may eradicate this disease in the county before it can be established.

Figure 2 Exit holes in the firewood from long horned beetles

The movement of pest infested firewood is becoming more of a concern as government officials are becoming much more aware of such problems associated with this pathway. Such pests as Emerald Ash Borer, Oak Wilt, Dutch elm disease, and Gypsy Moth can be moved with firewood.

Dutch elm disease on American elm was observed in several forested in creek areas in Phillips and Norton counties and also in the town of Portis in Osborne County.

SOYBEANS

As anticipated, charcoal rot is becoming a big problem to fields in Kansas. High incidences were observed in fields located along K-24 corridor from Osborne County to Clay County in north central Kansas. These fields were under drought stress and in the last week have quickly declined with large patches of dead plants. Upon inspection, the microsclerotia of the causal fungus can be observed under the epidermis of lower stem tissue. Other reports of charcoal rot were made in Marion County and in Franklin County.

Asian soybean rust continues to spread rather slowly in the southeast United States. On soybeans, it has been found in nine different counties in five states. The closest location to Kansas is central Louisiana. Kansas State University Extension service has a sentinel plot program and the Kansas Department of Agriculture regularly conducts surveillance for monitoring the potential for the rust disease in Kansas.

Other diseases that are present or producing symptoms in fields in Kansas include are brown spot, bacterial pustule, bacterial blight, soybean cyst nematode, soybean mosaic virus, and bean pod mottle virus.

SUNFLOWERS

Sunflower diseases were surveyed this past week in the northwest quarter of the state. Kansas State Extension reported a heavily infected field with down mildew in Thomas County. The field was on center pivot irrigation. Other diseases observed in sunflower were minor. They included rust, leaf spot, and *Rhizopus* head rot.